Hewlett Packard Enterprise

Case study

HPE Synergy future-proofs IT enabling Isala to adopt vital new medical applications

Versatile platform consolidates diverse workloads critical to patient care

Industry
Healthcare

Objective
Modernize IT to run next-generation clinical applications, with dynamic scalability and simpler administration

Approach
- Deploy HPE Synergy Composable Infrastructure, providing a consolidated, flexible platform for diverse workloads, including VDI and EMR

IT matters
- Gained a dynamic infrastructure to run numerous diverse workloads
- Increased performance and flexibility while simplifying administration
- Cut storage maintenance support costs in half

Business matters
- Assured availability for accessing applications critical to care
- Enabled easy adoption of new technologies driving medical advances
- Delivered predictable performance for vital clinical services like radiology

When adopting a new electronic medical records (EMR) system, leading Dutch hospital, Isala, modernized with **HPE Synergy** composable infrastructure, providing a flexible, future-proof platform to run the EMR and other diverse workloads, including a critical virtual desktop infrastructure (VDI). With HPE Synergy, Isala can easily and dynamically grow to handle new workloads in radiology and nuclear medicine, while simplifying IT administration.

As one of the largest hospitals in the Netherlands, serving a population of more than 800,000 people, Isala understands the vital need for delivering care where and when it's needed. Isala's five campuses across the northern interior of the country position the hospital to provide this population with a full range of services, from basic care to advanced clinical specialties, including cardiac surgery and rehabilitation, neurosurgery, and dialysis. To continually advance the level of care, Isala also engages in extensive scientific research, sharing this research in collaboration with 26 other hospitals in the Netherlands.

The life-critical work of such an extensive healthcare network is dependent on having a solid, reliable technology infrastructure. Everything from scheduling appointments to managing patient records, running diagnostic and lab systems, and supporting surgical operations requires consistent access to relevant applications and data 24/7. That's where Hewlett Packard Enterprise (HPE) comes in.

"HPE Synergy gives us more flexibility with less hassle to manage. The composable architecture will allow us to add resources without downtime. That's what we need to take us into the future."

– Jos Minnema, Infrastructure Architect, Isala

For years, Isala has relied on HPE technology as the foundation for its IT infrastructure. For example, critical applications such as electronic medical records (EMR) and picture archiving and communication system (PACS) ran on **HPE BladeSystem c7000 platforms** and **HPE ProLiant DL380 Servers**, with data served from **HPE 3PAR StoreServ 20000 all-flash storage**, and management provided through **HPE OneView**. As the hospital continues to evolve, it is also looking to the future in both its clinical applications and underlying infrastructure. This led most recently to a major project upgrading Isla's EMR environment (previously developed internally) to a standards-based EMR application, which required a fresh look at the infrastructure where the new EMR would eventually land.

Frank Pongers, Isala's manager of infrastructure services, notes, "When making an investment as large as a new EMR system we needed to be sure it landed on a modern, scalable platform that would prepare us for the future."

After consulting with HPE engineers, and with years of experience running the HPE BladeSystem, the Isala IT team was convinced HPE Synergy Composable Infrastructure was the next logical progression for the hospital's data center infrastructure.

Jos Minnema, infrastructure architect at Isala, points out, "HPE Synergy gives us more flexibility with less hassle to manage. The composable architecture will allow us to add resources without downtime. That's what we need to take us into the future."

Future-proofing with composable infrastructure

Isala is taking a phased approach in moving its applications and workloads over to the HPE Synergy platform, with the intent of adopting composable infrastructure as the standard for data center operations. The company took advantage of services from **HPE Pointnext**, including HPE Factory Integration Services to prebuild the infrastructure and stage the installation at an HPE facility in the Netherlands to validate that everything conformed with the hospital's requirements prior to on-site deployment. HPE Pointnext then provided Installation and Startup Services with an on-site project manager to oversee the deployment. As a result, Isala required very few internal resources involved in the deployment so they could stay focused on the most critical needs of the business.

To date, the hospital has deployed 14 HPE Synergy frames in each of two data centers, initially for its Citrix® XenDesktop® virtual desktop infrastructure (VDI), currently running Microsoft® Windows® 7. The HPE Synergy frames are populated with 180 HPE Synergy 480 Gen10 Compute Modules built on Intel® Xeon® Scalable 8100 series processors, and configured with 4,700 virtual desktops.

The HPE Synergy environment provides Isala with 140% of capacity across the two active-active data centers, allowing any one of the data centers to support 70% of the virtual desktops—those most critical to the hospital—in the event of a site loss. This is essential because doctors, nurses, physician's assistants, and other clinicians across all of Isala's locations rely on their virtual desktops to access patient medical records, radiology images, lab results, and hundreds of other applications vital for delivering care.

By moving its VDI environment from the HPE BladeSystem to HPE Synergy, Isala now has a highly flexible and dynamic environment that's easy to manage and evolve through the familiar HPE OneView interface. Minnema remarks, "Networking is simpler to connect and manage on HPE Synergy. And it's quite easy to get to the management modules through OneView."

Pongers adds, "By moving VDI onto HPE Synergy we're future proofed and able to take the next step of adding NVIDIA® cards to deploy Windows 10. This will support users working on new advances in areas like radiology and nuclear medicine."

HPE 3PAR flash array makes performance problems disappear

A key advantage of adopting HPE Synergy Composable Infrastructure is its ability to run any of Isala's 600-plus applications, including Isala's new EMR application when this project is completed.

While HPE Synergy will provide the modern, software-defined compute environment Isala requires for the future, the hospital plans to continue using its HPE 3PAR all-flash storage for its outstanding performance and reliability. HPE 3PAR was brought in to replace an aging EMC VMAX platform that, according to Pongers, never ran smoothly.

"We had constant problems with performance in our VMware® environment," Pongers recalls. "If we tried to restore a large database, that process interfered with VMs running on other systems. It was very unpredictable. We couldn't use any of the efficiency tools. It was an impossible situation to manage."

Minnema continues, "When we brought in HPE 3PAR, all our problems in the VMware environment disappeared. It is really a success story. We saw a huge improvement in performance for radiology, our biggest user. And now we are using thin provisioning, deduplication, compression—everything works great with no impact on VMs or other systems. HPE 3PAR has given us a scalable system with predictable performance that's a lot less hassle to work with."

In fact, since replacing EMC with HPE 3PAR, IT has cut in half its annual support and maintenance costs for storage, just by eliminating all the engineering hours needed to troubleshoot and resolve performance problems.

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Customer at a glance

Solution
Composable infrastructure to run diverse workloads

Hardware
- HPE Synergy 480 Gen10 Compute Modules
- HPE BladeSystem c7000
- HPE ProLiant DL380 Servers
- HPE 3PAR StoreServ 20000

HPE Pointnext services
- HPE Factory Integration Services
- HPE Installation and Deployment Services
- HPE Proactive Care

Software
- HPE OneView
- Citrix XenDesktop
- VMware vSphere®

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HPE IT operational services keep systems running their best

For added assurance in keeping its operations up and running, Isala relies on Proactive Care from HPE Pointnext. The service proactively detects component issues in the HPE Composable Infrastructure and other systems, and addresses situations before they have an impact on IT services or the business.

Minnema comments, "Our IT department is on a five-day work week, but if something breaks in our VDI environment over the weekend, the spare parts are there waiting for us or an HPE engineer to replace them Monday morning."

Redundancy in the HPE systems avoids downtime while the IT team replaces the necessary component.

What does all this mean to the doctors, nurses, and other staff at Isala? Pongers says that it is fundamentally enabling them to do their jobs every day. "For our clinical and administrative staff, having IT services is like having running water. Their virtual desktops must be available to access the applications and records central to running the hospital and caring for patients. We've seen in the past, if IT is not running, operations have to be stopped. Patients are sent home from their appointments. At one point, we had to close our emergency department for 30 minutes. The impact can be huge. With HPE Synergy and the operational services from HPE Pointnext, we do not have these worries."

Learn more at
hpe.com/synergy

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